MAKING A LAWN

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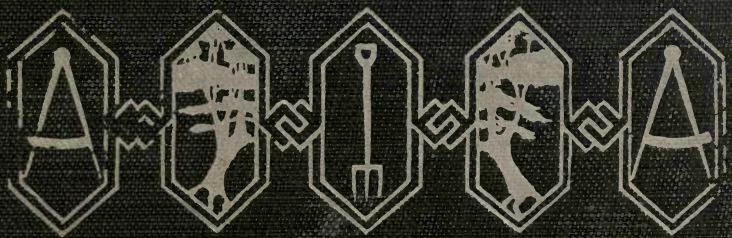
LUKE J. DOOGUE



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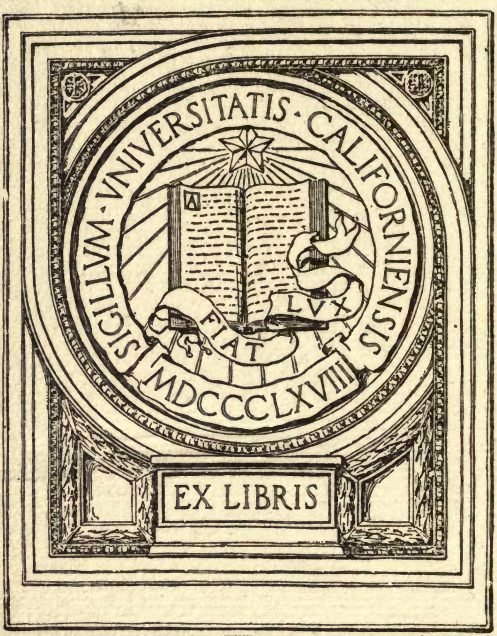
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MAKING A LAWN

THE HOUSE & GARDEN MAKING BOOKS

IT is the intention of the publishers to make this series of little volumes, of which *Making a Lawn* is one, a complete library of authoritative and well illustrated handbooks dealing with the activities of the home-maker and amateur gardener. Text, pictures and diagrams will, in each respective book, aim to make perfectly clear the possibility of having, and the means of having, some of the more important features of a modern country or suburban home. Among the titles already issued or planned for early publication are the following: *Making a Rose Garden; Making a Tennis Court; Making a Garden Bloom This Year; Making a Fireplace; Making Roads and Paths; Making a Poultry House; Making a Hotbed and Coldframe; Making Built-in Bookcases, Shelves and Seats; Making a Rock Garden; Making a Water Garden; Making a Perennial Border; Making a Shrubbery Group; Making a Naturalized Bulb Garden;* with others to be announced later.

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Lawn is probably the most important element in the setting for most country houses, yet all too frequently it is expected to make and take care of itself

MAKING A · LAWN ·

By LUKE J. DOOGUE
SUPERINTENDENT OF BOSTON PUBLIC GROUNDS DEPARTMENT

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MAKING A LAWN

Making a Lawn

THE SMALL LAWN, OLD AND NEW

TO the thousands of anxious inquirers, seeking solution of lawn difficulties, it would be more than delightful to say that a fine lawn could be had by very hard wishing, but honesty compels one to change the words "hard wishing" to "hard work," in order to keep strictly within the truth. A well-made lawn is a testimonial to a hustler, whether the area is small or large.

The majority of inquiries about lawn needs come from people having small places, from a few hundred to a few thousand feet, and the symptoms described

can be divided into two classes: one where they want to make grass grow where it has never grown before, and the other where the call is for information to assist in restoring old lawns that have petered out. Let us take up the last condition first.

Where grass has grown for some years it is conclusive evidence that there must be soil beneath, which, perhaps because of neglect, has ceased to supply the nourishment necessary to maintain the vigor of the sod growing upon it. As a consequence, weeds gradually creep in and finally crowd out every blade of grass.

A condition like this is easily remedied and an improvement brought about in short order and at very small expense.

In the first place make a general clearing up of the weeds and do it as thoroughly as possible. Take them out with a

strong knife, cutting deep into the ground. An asparagus knife is the best for this purpose.

If the place under treatment were to be spaded up, this weed-cleaning with the knife would not be necessary, but the object in this instance is to disturb the soil as little as possible.

With the weeds out of the way, go over the whole place with a sharp rake and scratch the earth to the depth of half an inch. In doing this remember to be not too severe on spots where there is any grass growing, applying the rake lightly here. After the raking, sow grass seed thickly and evenly, raking it in, and finish by watering and rolling. Be sure to roll heavily, water regularly, and good results will surely come.

This, in brief, is the most practical way to treat the conditions described.

If, however, you should find that the ground shows patches of moss and sorrel, the treatment just suggested will not apply. The land is probably sour, and should be plowed up, limed, and allowed to lay rough all winter. Use about a bushel and a half of air-slaked lime to every thousand square feet.

When the object is to make a lawn where there never has been one, the plow or the spade is the most effective weapon.

It must be kept in mind that grass on a lawn is a great feeder, and no soil can be made too rich to supply its food requirements. A lawn is a permanent planting, not something that is to last merely for a season.

Start this work of preparation for a new lawn in the fall. Spade the land to the depth of two feet, or, better still, run a plow through it, if the size of

Here is an interesting and ingenious scheme of getting a path over the lawn without increasing the labor of cutting. The stepping-stones are set flush with the ground

the place warrants. Work in plenty of well-rotted manure, and during the winter the frost and snow will greatly improve conditions, killing the weeds, and mellowing the soil as nothing else can.

In the spring, harrow and cross-harrow the plot, smooth out the surface, rake fine, and sow your seed. If, however, the soil is gravelly, there is no use trying to doctor it up with the expectation of getting good results.

As has been said, you need a good loam in which to grow grass, so that if it is not good you must dig out what is there to the depth of two feet and replace it with suitable soil.

There is no short-cut for reaching results with the aid of fertilizers, for all the chemicals in the land will amount to but little if the soil conditions are not proper to receive them.

It is simply a question of supplying the material to get results.

A New Way to Renovate a Small Lawn

On a small place where the necessity for radical treatment is apparent, yet where it is not advisable to upset the premises at that particular time, results can be reached in a way that will be effectual.

Take a round stick about an inch in diameter and three feet long, and sharpen one end of it. At frequent intervals about the grounds drive the stick to the depth of about two feet. Make many such holes, and into these ram a mixture of finely powdered manure, hardwood ashes, and bone meal. Cover the holes with loam, and on the top of each put a piece of sod and beat it down with the back of a spade.

In a short time the good effects of this treatment will manifest themselves, and during the subsequent season the treatment can be extended to the parts not touched before. It practically means that the land will be as thoroughly renovated as if it had been plowed and harrowed. This is no fanciful idea, for the operation justifies results whenever tried. It is advisable to water liberally and regularly for some time.

Of course this applies particularly to very small places, and nothing will be gained by treating large areas this way.

Shrubs and trees are greatly benefited by this method of administering nourishment, and where old plants have grown for a long time and are seemingly stunted, this feeding will stimulate them to immediate growth.

THE TREATMENT OF LARGE AREAS

WHILE it is a very simple matter to shape up a small grass plot, renovating it as to soil and all that is necessary to lay the foundation of a successful lawn, it becomes another matter when large areas are in question. Here it requires taste, experience, and familiarity with prevailing conditions to enable one successfully to get out of the problem all that there is in it. If we have not had the necessary experience, it would not be safe to venture upon doing the work without expert advice.

Developing a large area means the making of a picture that, year in and year out, is to be before our eyes, and unless

there is a most harmonious relation of all accessories—trees, contours, vistas, roads, and so on—there is sure to come a time of wearying monotony, caused by a realization of the fact that we had not been quite equal, through our lack of experience, to develop the place as it might have been developed.

A piece of ground in the rough must first be shaped up by draining, removing trees or stones, planning roads and such things, before the smoothing process can be attempted, and it is in this roughing-out process where the future landscape picture is either made or destroyed.

Here is where the professional landscape man can save you many dollars and much disappointment. I have seen so many sad results in cases of land development where too much confidence has been the stumbling-block on the road to

success, that I feel justified in harping on the necessity of asking advice from those who are competent to give it.

Saving Trees

Great consideration should be given to the matter of saving trees, whether these are large or small. Small trees can be handled like so much merchandise, and successfully moved from place to place. It is preferable to move these in winter. Dig about them so that there will be a ball of earth large enough to keep intact; then it is necessary merely to allow this ball to freeze up hard before tilting it onto a stone drag, shifting it and its fellows to positions that will most benefit the landscape.

Large trees can be moved, but at considerable expense, and such work should

be left to the professionals. They have the facilities and from experience the knowledge and knack of it, and this means much for success. Some companies will even give a bond to guarantee their work.

Trees about which the grade is to be raised should be protected, so that the soil will not come within some distance of the trunk. A rough piling of stones about the tree, or a circle of drain pipe about it will give the needed protection. Trees play such a vital part in the adornment of a piece of land, whether large or small, that none that is needed should be sacrificed until every effort to save it has failed.

Draining Land

Where the soil is soggy and retains too much moisture, this condition must be remedied before attempting to make it

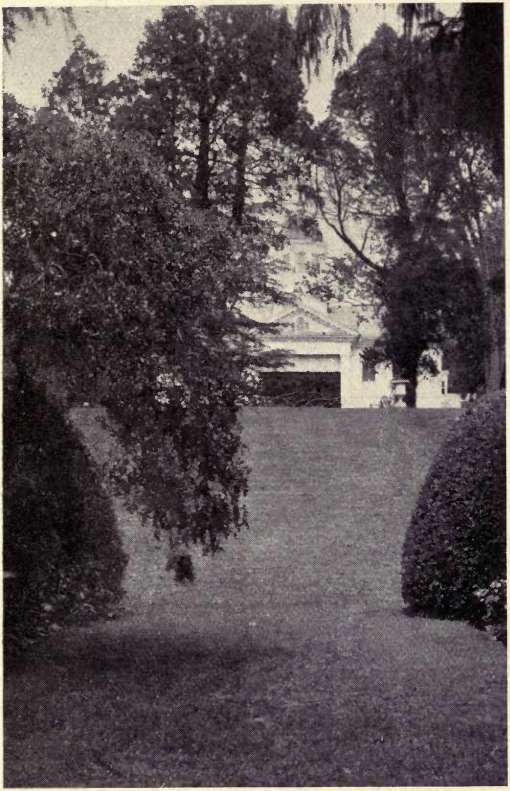
into a lawn. The remedy is found by draining, and this is done by digging ditches or laying tiles under ground at varying distances apart, all tending towards the lowest part of the land, to which the water must be induced to flow. The number of drains is to be determined by existing conditions.

Land that could not be used before will, after a system of drainage has been installed, be so benefited that most anything can be grown upon it. Lawns made on such land are always luxuriant and resist the effect of drought even of long duration, drawing upon the supply of water that extends deep down below the surface.

GRASS SEED

SO much has been written on the subject of lawn-making that about every one interested in this work is fully competent, theoretically at least, to carry through the process of land renovation and preparation, whether it be for a small lawn or an area consisting of acres. The subject along these lines has been exhaustively treated, but, strange to say, the equally important subject of grass seed has been rather neglected. While many amateurs can talk freely on the preparation of the land, they are not so confident when treating of grass seed. It seems strange that this is the case when so much depends on the suitability of the grass seed to the land for the making

of a successful lawn. The only reason, as far as I can see, why people are not versed in this matter is that they have been frightened by the botanical names of grasses, which seem wholly unsuitable and too difficult of pronunciation for such commonplace things. There is, however, just as much individuality in a plant produced from a grass seed as in the choicest plant in a greenhouse. One kind of grass seed will produce a low-growing plant while another grows high; one wants a moist situation, another a dry one; some will germinate in the shade, others will not, and so on through the list. If a person knows each kind and its possibilities and requirements, he will be able to choose the grass best suited for his wants, and by careful trials arrange the mixtures with better success than the man in the wholesale house who is obliged to



For sloping banks and terracing, a mixture of Kentucky Blue, Rhode Island Bent, Creeping Bent, Sheep Fescue and White Clover, in the proportions given, will probably answer

guess at what is best for his wants. Start out, then, in the primer class and tabulate some of the best grasses used for lawns, and tag them with both their names, the botanical and the common ones.

Kentucky Blue Grass—*Poa pratensis.* Fine for lawns; grows slowly but vigorously almost everywhere but on an acid soil.

Red Top—*Agrostis vulgaris.* Shows results more quickly than Blue Grass; will thrive on a sandy soil; fine in combination with Blue Grass.

English Rye Grass—*Lolium perenne.* Grows quickly and shows almost immediate results; good to combine with the slow-growing Blue Grass.

Various-leaved Fescue—*Festuca heterophylla.* Good for shady and moist places.

Rhode Island Bent—*Agrostis canina.* Has a creeping habit; good for putting-greens, sandy soils.

Creeping Bent—*Agrostis stolonifera.* Creeping habit; good for sandy places and to bind banks or sloping places. Combined with Rhode Island Bent for putting-greens.

Crested Dog's-tail—*Cynosurus cristatus.* Forms a low and compact sward; good for slopes and shady places.

Wood Meadow Grass—*Poa nemoralis.* Good for shady places; is very hardy.

Red Fescue—*Festuca rubra.* Thrives on poor soils and gravelly banks.

White Clover—*Trifolium repens.* Good for slopes; not to be recommended for a lawn.

Sheep Fescue—*Festuca ovina.* Good for light, dry soils.

Now, with so much as a reference li-

brary, you will have sufficient knowledge of the kinds of seeds to draw from to make combinations that will fit any situation. I would further suggest that you go to a wholesale house and get a sample of each of these seeds and examine them. Get just a little of each in an envelope. Make a comparative examination of the seeds, holding a little in the palm of the hand. As you look at each seed repeat its name a few times and recall its characteristics, and you will be surprised to find that on the second or third trial every name will suggest itself the moment your eyes rest on the seed. With a knowledge of the seeds you can then go to your dealer and tell him what you want—not necessarily what he thinks you want. You are then a better judge than he is.

It is worth while following the subject farther, for the results will more than

repay the trouble. Test the seeds. Make shallow boxes and fill them with loam, and sow each kind of seed just as you would on a lawn. Put a label at the head of the box and on it the time of sowing the seed. Do this with as many as you can. Then watch and make notes of the time it takes for germination. Note also the character of the blades. Having finished this you will have a very liberal education in the subject of grass.

Should you not care to do as suggested above, you will be dependent on others to get what you most need. If you should go to a dozen people and ask them to suggest a combination of seeds, they would all give them readily to you, but no two proportions would be alike. If you should ask for a single grass, the majority would suggest Kentucky Blue Grass. For a single grass there is nothing better suited

for all conditions. There is this objection to it, however: it is not a nervous man's grass. You cannot plant it to-day and have a lawn next month. If you can afford to wait, sow Kentucky Blue and your patience will be well rewarded. It makes a permanent lawn.

To introduce the ready-made lawn, use a combination of Kentucky Blue, Red Top, and English Rye. The Blue Grass is slow, but the Rye and Red Top produce speedier results. The first month will see the newly seeded space a carpet of green. In time the Rye passes, the Red Top continues to cover, while the Blue Grass grows sturdier each day until it crowds everything out by virtue of its own strength. Use 12 lbs. of Kentucky Blue Grass, 5 lbs. of Red Top and 3 lbs. of English Rye Grass to the bushel, and sow 3 1-2 to 4 bushels to the acre. This

makes a reliable combination. It is common to hear people asking for grass that will grow in shady places, but it is always difficult to determine the degree of shade. A place may be shaded and yet suitable for growing grass, or it may be so shaded that no grass known could be made to germinate there. In places where there is no heavy dripping and where the ground is not absolutely dark, use the following:

Kentucky Blue Grass, Wood Meadow Grass, Various-leaved Fescue, and Crested Dog's-tail. Use 35 per cent. of the first two and 15 per cent. of the last two.

For conditions that require a quick-growing grass, and something that will bind and make a holding upon slopes under difficult conditions, the following is recommended: Kentucky Blue Grass, 30 per cent.; R. I. Bent, 30 per cent.; Creeping Bent, 25 per cent.; Sheep Fescue,

The turf on a putting-green or tennis court must be dense and low, as well as tough. Rhode Island Bent and Creeping Bent in combination are frequently used on a sandy soil to stunt the growth

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10 per cent., and White Clover, 5 per cent. This is one of the places where White Clover is an essential. Under these conditions it fulfils its mission perfectly. While all the named kinds may not flourish, there will be enough to make the work successful.

The turf on a putting-green must be dense and low, and tough enough to stand a lot of rough usage. A combination of Rhode Island Bent and Creeping Bent is about the best thing for this purpose. To check up, just refer back to your schedule and see what it says regarding the qualities of these grasses.

The soil on a putting-green should be of a sandy nature. This keeps the grass stunted through lack of much food, and consequently better fits it for its purpose.

Never buy grass seed by the bushel. Buy it by weight, or stipulate that there

shall be so many pounds to the bushel. It will cost you a high price, but it will be far cheaper in the end than to buy something inexpensive that has more than a third of sweepings and useless bulk. You certainly lose nothing by buying the very best seed that your dealer can offer you.

Do not be ashamed to ask for samples before buying, and also get samples from a number of places and compare the different seeds. Spread them out in your hand and see if they are clean and without chaff. A seed with a large proportion of dust and chaff is not worth buying. It should be your consideration to see whether you are getting what you pay for. If you show evidences of knowing the proper seeds you will receive a most respectful hearing from the tradesman. Do not balk at the price of re-cleaned seed.

It means that you are going to get something for your money. It is worth much more than the seed sold in bulk that is not re-cleaned.

SOWING THE SEED

THE nearest thing, by way of comparison, to a lawn is a bed of plants that you set out in your garden every spring. When you think it is planting time you go to this bed with spade or fork and turn the earth up from the deep bottom, putting in plenty of well-rotted manure, thus ministering to the soil according to its needs. Then you set out the plants, and if weeds grow up you dig them out, after which you water the spot intelligently. For this labor your reward comes to you in the shape of an abundance of bloom and foliage.

Just as truly is a lawn a bed of plants needing an equal amount of treatment. Grass is nothing but a collection of thou-

sands of little plants crowded together, which must have nourishment, and from which the weeds must be taken. Likewise the soil must be given water as it is needed and the earth must be made mellow for the roots, to a good depth. It makes no difference how much you pay for your grass seed, how good or bad it is, or what kind of fertilizers you use, if the bed is not properly prepared in the first place. Without this fundamental preparation, grass plants will not grow, or if they do, will not thrive.

It is quite a trick to sow grass seed evenly so that it will germinate without giving the plot a spotty effect. It should be spread at the rate of about three bushels to the acre, and this sowing can be successfully done only on a quiet day. Even a very light wind is liable to pile up your seed on your neighbor's lot or on

your own in places not wanted. Keep the seed in a pail while sowing, and, after taking a handful, bend close to the soil and let the seed feed through the fingers as the arm swings back and forth in a semicircle. This is very much easier to say than to do, but a little experience will make one quite proficient. To help still more, sow the seed two ways, one at right angles to the other. After sowing, rake lightly and then finish the work by putting a heavy roller over it.

While thick sowing has the advantage of discouraging a growth of weeds, there is a limit that cannot be safely passed. Seed too thickly sown will mat and damp out, leaving great patches on the lawn. Do not exceed the quantity suggested above.

Spring sowing should be done just as soon as the frost is out of the ground.

This early sowing gives the young grass a chance to establish itself before the severe summer heat comes on. Careful watering is necessary, with a fine spray, and if regularly done will induce rapid germination. In watering do not wash out the seed by too heavy a stream.

SODDING

LIKE seeding, sodding should be done in the early spring or fall to get the best results. Oftentimes it is necessary to do the work in midsummer and this, while not advisable, can be successfully accomplished if the sods are laid soon after they are cut and then copiously watered every day until all danger of drying out has passed.

In butting the sods together, use a wooden mallet, and pound the sod into close contact with the loam beneath, flattening all joints so that the growth will be uniform.

On large seeded areas outline these with a border of sods, which gives a well-defined edge and trim appearance to the

The inevitable result of sowing a cheap, ready-made mixture of grass seed. It is worth while studying the qualities of the various elements and making your own mixture

work. If you should know of a place where there is a particularly fine growth of grass, it would be a paying proposition to buy sufficient sods from it to answer your needs. Sods, cut and delivered, will cost about eight cents per square foot. This price may be shaded somewhat if the sods are bought in bulk and the cutting and carting is done by yourself. Under any circumstances the work will be expensive.

On banks and terraces it is preferable to use sods rather than seeding. The sods can be held in place with wooden pegs driven through them seven or eight inches into the bank. Over this work scatter some seed and give a light dressing of loam; then pound the whole to an even surface.

When the bank is too steep to hold the sods pegged in this way, they should be

piled upon each other horizontally, so that the ends will form the surface of the bank. This effects the double purpose of creating a permanent sward and also a depth of ten inches of loam upon which it can feed.

GOOD LOAM AND FERTILIZERS

LOAM is scarce; that is, *good* loam is scarce. To help make up the deficiency, every one should form a compost heap, and into it pile leaves, lawn rakings, pieces of sod, and all such matter, all of which will be reduced in time by decomposition to the much-desired humus. A small quantity of this humus, mixed with fairly good loam, will make good loam of it all, and suitable for sustaining plant life.

In the fall, when the leaves are falling from the trees, it is a good idea to gather up from the gutters the accumulated leaves and put them in the compost heap. There may be a little expense and trouble

to it, but there is no question as to the fact that you will be fully repaid when you find the necessity for some real loam.

Near cities loam of very inferior quality will cost at least $2 per cubic yard, and if one has a quantity of leaf-mould, made as suggested, and will mix it with this loam, a very desirable quality can be produced. The leaf-mould is the life of the soil and absolutely essential to satisfactory results.

Spring Top-dressing

A lawn that has been properly made will not suffer if it is not given a yearly dressing, for it will have sufficient food supply in the ground to keep it going for years.

Strange as it may seem, many good lawns have been ruined by being given a heavy application of manure year after

year. When a top-dressing is necessary on soil that is good, Canada hardwood ashes and bone meal will supply all the nourishment that is necessary. Spread the ashes thickly on the lawn until they show white on the grass, and do the work preferably before a rain, so that the nourishment may be washed into the soil.

The Canada hardwood ashes, as usually found in the market, contain from one to five per cent. of potash, but to get the results you are looking for, the ashes should contain from seven to nine per cent. of potash. In purchasing this fertilizer in large quantities demand a guaranteed analysis, otherwise you are liable to get something little better than what you take out of your stove, and wholly useless for lawn purposes. There are good ashes on the market and they can be had if one goes after them vigorously

enough and gives some indication of a knowledge of what good ashes are.

When it is not possible to get what you are looking for, I would recommend mixing muriate of potash with finely sifted loam, and spreading it broadcast over the grass. This treatment is always efficacious, as you are absolutely sure of getting what is necessary for the land.

Manure Top-dressing

Many prefer to use a top-dressing of manure, regardless of conditions. It is sure to bring more or less weeds. If you decide to use it, however, get the thoroughly decomposed kind, as this means a minimum of weeds. I do not want to create the impression that I am trying to belittle the fertilizing value of manure. I believe in having a liberal quantity of it incorporated with the soil

One of the most difficult places in which to make a lawn is under large shade trees. A combination of Kentucky Blue, Wood Meadow, Various-leaved Fescue and Crested Dog's-tail is usually successful

when the lawn is made, and I also believe that on such a soil Canada ashes and bone meal are very much more suitable to keep it up to pitch than is a top-dressing of manure.

When manure is used for a top-dressing, do not get it on too thick, and do not leave it too long on the grass in the spring. Nothing is to be gained by either of these mistakes and much killing out is apt to result.

There was a time, some years ago, when it was possible to buy sheep manure that was worth something, but at the present time it is sold in powder form, and invites a strong suspicion of adulteration and of containing very much more than what is being paid for. If it is possible for you to get good sheep manure, use that by all means. It is efficient, cleanly, and produces very few weeds. It is best

used at the rate of about a ton to the acre.

Nitrate of soda is a very vigorous stimulant and produces quick results. It is economical, requiring but small quantities to cover large areas. Spread broadcast, about 175 lbs. to the acre; or, dissolved, 3 lbs. to every 100 gals. of water. The dry application should be made always before a rainstorm, otherwise much burning is apt to result to the grass. For an occasional application it is all right to use this, but for year-in-and-year-out fertilizer, it should be alternated with other things.

LAWN-MOWER, ROLLER, AND HOSE

AFTER you have your ground made, your seed sown and germinated, your trouble is not all over, for it is a critical period through which to carry the tender grass to a hardy condition.

Young grass should not be cut before it is three inches high, and this means that a scythe should be used in preference to a lawn-mower, as it is difficult to get the blades high enough to allow this length. In cutting for the first time, try to do it on a cloudy day, as this will prevent any possibility of scorching or burning. After a few weeks the grass will have so toughened that it will be benefited by frequent cuttings—even twice a week.

The roller should be used after every cutting, and although it may seemingly be working injury by crushing down the tender grass, it is in reality making sure a solid and compact sod. In the middle of the summer when the weather is very hot, be careful not to crop too close, as the roots are liable to be killed out by the sun.

When cutting your grass you will find it a great saving to have some sort of a grass-catcher on your lawn-mower. One can be made easily, but very handy ones are sold at a small price. They prevent the wear and tear to a lawn that results from the hard raking necessary when not used.

There is a good grass-catcher that fits into the back of all machines; it is very effective and costs about fifty cents. It so effectively catches all the grass that

comes from the machine that little raking is afterwards necessary. If you prefer the rake it is best to use a wooden one, as iron teeth do great damage to a heavy sod.

Where the grass is cut frequently the clippings may safely be left on the ground, but heavy grass should be always gathered up.

The Lawn-mower

There are hundreds of makes of lawn-mowers on the market, but of these very few will stand the test of a season's hard usage. These few will be found to be the standard makes of good design, and costing a seemingly high price. When you can get a lawn-mower with a pound of tea you may be sure that it is time to be suspicious, regardless of the pretty paint and ornamentation that makes it a sym-

phony of colors. A good mower means that your lawn will look well after being cut with it, and it also means that the first seemingly high cost will be all that you will be called upon to expend in years to come. Such a mower is practically indestructible.

Once or twice during the season, give it an overhauling. Grass and grit will creep in, and unless it is removed the efficiency of the machine will be greatly reduced.

It sounds like automobile parlance to say "Use good oil," but this really applies equally as strongly to a lawn-mower. Cheap oil is expensive in the long run, as it thickens up and clogs the bearings, and makes it impossible for the mower to do its best work.

This may seem like straining a point to get down to such trivial details, but it

It is surprising what a lot of grass and dirt finds its way into the lawn-mower. Take it apart once a season to clean and oil

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is just these little things that go to make up the getting and keeping of a lawn.

The Roller

Next to having good seed to sow, on properly prepared ground, the great essential in lawn-making is a proper kind of roller to use as occasion requires. Few people realize just how important a part a roller plays in the upkeep of any grass area, but it is no exaggeration to say that without one, successful results will be difficult if not impossible of achievement. Use a roller—a heavy roller—on your lawn early in the spring to repair the damage that the freezing and thawing has caused in the winter.

The early rolling levels the surface, packs the earth about the grass roots and makes it possible for them to draw the moisture from deep down in the

ground. A roller is to be used often, not once each season. Its consistent use means that you will have fewer weeds, thicker and better colored grass; the disfiguring moles will find the ground too difficult to burrow through, moisture will be retained longer, and a noticeably better condition will be noted throughout the whole lawn.

The old-time stone roller was an instrument of torture, and almost wholly unsuited for lawn work as suggested. There are now on the market dozens of ball-bearing rollers that are very easily handled. The adjustable kind, in which there are compartments to hold either sand or water to vary the weight, is the kind that should be purchased. With it you have a roller light enough to use for seeding, or heavy enough for road work, and the prices are not prohibitive.

The Hose

The hose is a subject to which very little attention is given. Paradoxical as it may seem, all rubber hose is not rubber hose, and because of this many lawns suffer from want of water, because the supposedly rubber hose has proved, when most needed, to be a combination of paper and scrap. A first-quality hose will cost from twenty to thirty cents a foot—a frightful price when comparison is made to the bargain price of four cents a foot. The expensive kind will last for years, and even after it begins to show signs of wear it can be used many years longer by proper repairing. The cheap hose bursts once, and its usefulness is at an end, as the first burst is only a preliminary of total dissolution.

When a good hose bursts it is best re-

paired by cutting entirely through it and removing the damaged part, and then joining the ends with a little brass sleeve that is easily inserted into each of the severed ends and which has reversed prongs to prevent its slipping out. This is one of the best ready-made menders on the market, and it prolongs the life of a hose for years.

Keep your hose on a reel. Empty it of water before winding up, and never allow it to lie baking in the sun. This latter is a very common fault and is the cause of much good hose being spoiled.

Another seemingly trivial yet important thing is to caution against so fastening the hose to the tap that it pulls away from it at right-angles.

For ordinary purposes the half-inch size of hose is the best. It costs less in the first place, is more easily handled,

and the wear and tear is much less than on the larger sizes.

You never see a gardener using any spraying contrivance on the end of a hose. In his thumb and forefinger, which he skillfully moves over the flowing stream, he has a combination of sprayers that can produce the heaviest stream or the finest mist at will. This is to be recommended, but few will care to follow the course of training necessary to acquire the efficiency of the gardener.

WEEDS AND OTHER PESTS

EVEN if you paid a thousand dollars a bushel for your grass seed, and then spent as much more on the preparation of your land, you could not, I am sorry to say, escape having weeds.

The thing to do when you have them is to get rid of them, and this is accomplished only by getting right after them with a persistence proportionate to the abundance of the weeds. The knife is the only real weapon for this. After digging out your weeds, sow in grass seed with the idea of making the grass grow so thick that there will be no place for the weeds to creep in. Dandelions and plantains are simple matters that can be handled easily, but where Crab Grass

shows up, there is certainly work ahead to get the best of it. It is a destroyer of the first rank, a veritable pest. It is an annual that seeds itself each year and kills out under the first frost, leaving great bald spaces in the lawn to show where it has been. Even after it has been killed by the frost its baneful influence is not ended, for it has spread broadcast its seeds for the next year's crop.

When you find it, dig it out. It means work and lots of it, but it is the only way to conquer it. Set the blades of the mower low, and after dragging the grass up with a rake, run the machine over it; and this should be done early in the year, before July. There is no weed to equal this as a nuisance.

On newly-made lawns the weeds are easily removed, and they should be carefully watched so as not to allow them to

get too far ahead. Chickweed is almost as bad as Crab Grass, and when you find the combination, Crab Grass and Chickweed, the simplest solution is to spade or plow the place up in the fall and leave it exposed for the winter.

For the broad-leaved varieties of weeds there is a preparation of what is called sand on the market that I have tried with very good success. I sprinkle it on the weeds and within an hour afterwards they have shriveled and turned black.

While it doubtless is very efficient in destroying the top growth, I am unable to say that it is at all injurious to the roots, and may, perhaps, even stimulate them to renewed growth the following season. However, my experience with it was a happy one, for just as soon as the weeds died down I sowed in grass seed, which quickly germinated.

There is only one sure way of eradicating weeds, and that is by cutting them out with a knife as soon as they appear. Delay in the attack will give them time to bring up heavy reinforcements

Worms, Ants, and Moles

Very often earthworms become very disfiguring on a grass plot. Where there are many present it is an indication that the earth is in poor condition, compacted, and needing humus. An application of strong lime-water will drive many to the surface, where they can be swept up; or a heavy rolling with a 1,500-lb. roller will do much to discourage them.

It is surprising how much damage a colony of ants can do on a lawn. They should be looked after the first time they are noticed, for they work rapidly, and the longer neglected the more difficult it it is to eradicate them.

There are many remedies recommended, but the best one lies in the use of bisulphide of carbon. This is very effective, but it has come into such common use

that a word of caution should be given as to its handling. It is very volatile and, when near flame, powerfully explosive, and should be handled with great care. Pour it into the runways of the ants, and then throw over these a mat. The fumes will speedily kill all the ants. A better way, however, is to drive a stick into the ground in several places where the colony is located, and in these holes pour the carbon, afterwards plugging the holes up tightly.

Moles are frequently found on lawns, but they are not serious because they can be easily controlled by heavily rolling or by traps made to catch them. Where there is a suspicion of the presence of moles, no time should be lost in getting after them. They sometimes work for a long time before their destructive borings are evident, and then it will take much

labor to get ahead of them. Keep the heavy roller going as an excellent preventive.

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